

# Google Cloud

## **DEVELOPER'S CHEAT SHEET**

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Created by the Google Developer Relations Team Maintained at https://github.com/gregsramblings/google-cloud-4-words

#### COMPUTE

App Engine Managed app platform Cloud Functions Event-driven serverless functions Cloud Run Serverless for containerized applications Compute Engine VMs, GPUs, TPUs, Disks Kubernetes Engine (GKE) Managed Kubernetes/containers Anthos Enterprise hybrid/multi-cloud platform

#### **STORAGE**

Cloud Storage Object storage and serving Archival occasional access storage Nearline Coldline Archival rare access storage Persistent Disk VM-attached disks Cloud Filestore Managed NFS server

#### **DATABASES**

Cloud Bigtable

Horizontally scalable document DB Cloud Datastore Cloud Firestore Strongly-consistent serverless document DB Managed Redis Cloud Memorystore Horizontally scalable relational DB Cloud Spanner Cloud SQL Managed MySQL and PostgreSQL

Petabyte-scale, low-latency, non-relational

## DATA AND ANALYTICS

BigQuery Data warehouse/analytics BigQuery BI Engine In-memory analytics engine BigQuery ML BigQuery model training/serving Cloud Composer Managed workflow orchestration service Cloud Data Fusion Graphically manage data pipelines Cloud Dataflow Stream/batch data processing Cloud Datalab Managed Jupyter notebook Cloud Dataprep Visual data wrangling Cloud Dataproc Managed Spark and Hadoop Global real-time messaging Cloud Pub/Sub Data Catalog Metadata management service Data Studio Collaborative data exploration/dashboarding Genomics Managed genomics platform

#### AI/ML

Hosted AI component sharing Al Hub Al Platform Managed platform for ML Data labeling by humans Al Platform Data Labeling Preconfigured VMs for deep learning Al Platform Deep Learning VMs Al Platform Notebooks Managed JupyterLab notebook instances Al Platform Training Parallel and distributed training

Al Platform Predictions AutoML Natural Language AutoML Tables AutoML Translation AutoML Video Intelligence AutoML Vision Cloud Al Building Blocks Cloud Natural Language API Cloud Speech-To-Text API Cloud Talent Solutions API Cloud Text-To-Speech API Cloud Translation API Cloud Video Intelligence API Cloud Vision API Cloud TPU Dialogflow Enterprise Edition Document Understanding Al Recommendations Al Vision Product Search

Autoscaled model serving Custom text models Custom structured data models Custom domain-specific translation Custom video annotation models Custom image models Hosted AI component repository Text parsing and analysis Convert audio to text Job search with ML Convert text to audio Language detection and translation Scene-level video annotation Image recognition and classification Hardware acceleration for ML Create conversational interfaces Analyze, classify, search documents Create custom recommendations Visual search for products

#### **NETWORKING**

Carrier Peering Peer through a carrier Direct Peering Peer with GCP Dedicated private network connection Dedicated Interconnect Partner Interconnect Connect on-prem network to VPC Cloud Armor DDoS protection and WAF Cloud CDN Content delivery network Cloud DNS Programmable DNS serving Cloud Load Balancing Multi-region load distribution Cloud NAT Network address translation service IPsec VPN Virtual private network connection Network Service Tiers Price vs performance tiering Network Telemetry Network telemetry service Traffic Director Service mesh traffic management Google Cloud Service Mesh Service-aware network management Software defined networking Virtual Private Cloud

## INTERNET OF THINGS (IoT)

Cloud IoT Core Device management and ingest data

#### **IDENTITY AND SECURITY**

Audit cloud provider access Access Transparency Binary Authorization Kubernetes deploy-time security Cloud Audit Loas Audit trails for GCP Cloud Data Loss Prevention API Classify and redact sensitive data Cloud HSM Hardware security module service Cloud IAM Resource access control Cloud Identity Manage users, devices & apps Cloud Identity-Aware Proxy Identity-based app sign in Cloud Key Management Service Hosted key management service Cloud Resource Manager Cloud project metadata management Cloud Security Scanner App engine security scanner Cloud Security Command Center Asset inventory, discovery, search, management Context-aware Access End-user attribute-based access control

**Event Threat Detection** Scans for suspicious activity Two-step key verification Security Key Enforcement Shielded VMs Hardened VMs

Titan Security Key Two-factor authentication (2FA) device

**VPC Service Controls** VPC constrain data

## MANAGEMENT TOOLS

Cloud APIs

Cloud Billing

Cloud Billing API

Cloud Mobile App

Cloud Console

APIs for cloud services Billing and cost management tools Programmatically manage GCP billing Web-based management console Cloud Deployment Manager Templated infrastructure deployment iOS/Android GCP manager app

Cloud Shell Browser-based terminal/CLI Stackdriver Debugger Live production debugging Stackdriver Error Reporting App error reporting Stackdriver Logging Centralized logging Stackdriver Monitoring Infrastructure and application monitoring

Stackdriver Profiler CPU and heap profiling Stackdriver Transparent SLIs Monitor GCP services App performance insights Stackdriver Trace

#### **DEVELOPER TOOLS**

Cloud SDK CLI for GCP Cloud Build Continuous integration/delivery platform Cloud Code Cloud native IDE extensions Cloud Source Repositories Hosted private git repos Cloud Scheduler Managed cron job service Cloud Tasks Asynchronous task execution IntelliJ GCP tool Cloud Tools for IntelliJ Cloud Tools for PowerShell PowerShell GCP tools Cloud Tools for Visual Studio Visual Studio GCP tools Eclipse GCP tools Cloud Tools for Eclipse Container Registry Private container registry/storage Gradle App Engine Plugin Gradle App Engine plugin Maven App Engine Plugin Maven App Engine plugin

#### MIGRATION TO GCP

Data migration tools/CLI Cloud Data Transfer Google Transfer Appliance Rentable data transport box Cloud Storage Transfer Service Cloud to cloud transfers BigQuery Data Transfer Service Bulk import analytics data Migrate from Redshift to BigQuery Migrate from Amazon Redshift Migrate from Teradata Migrate from Teradata to BigQuery Migrate VMs to GKE containers Migrate for Anthos Migrate for Compute Engine Compute Engine migration tools VM Migration VM migration tools

## API PLATFORM AND ECOSYSTEMS

API Analytics API metrics Monetize APIs **API** Monetization Apigee API Platform Develop, secure, monitor APIs API protection from attacks Apigee Sense Apigee Hybrid Manage hybrid/multi-cloud API environments Cloud Endpoints Cloud API gateway Healthcare system GCP interoperability Cloud Healthcare API Developer Portal API managment portal

Partner & open source marketplace

#### GOOGLE MAPS PLATFORM

GCP Marketplace

Directions API Get directions between locations Distance Matrix API Calculate travel times Geocoding API Convert address to/from coordinates Geolocation API Derive location without GPS Maps Embed API Web embedded maps Maps JavaScript API Dynamic web maps Maps SDK for Android Maps SDK for Android Maps SDK for iOS Maps SDK for iOS Maps Static API Web static maps Maps Unity SDK Unity SDK for games Maps URLs URL scheme for maps Places API Metadata about places (REST) Places Library, Maps JS API Metadata about places (JavaScript) Places SDK for Android Places SDK for Android Places SDK for iOS Places SDK for iOS Roads API Metadata about roads Street View Static API Static street view images Street View Service Interactive street view images Convert coordinates to timezone Time Zone API

### G SUITE PLATFORM

App Maker Assistive app building Apps Script Extend and automate everything Editor Add-ons Extend Docs, Sheets, Slides Gmail Add-ons Contextual apps in Gmail Hangouts Chat Bots Conversational bots in chat Calendar API Create and manage calendars Provision and manage classrooms Classroom API Create and edit documents Docs API Drive API Read and write files Gmail API **Enhance Gmail** Sheets API Read and write spreadsheets Slides API Create and edit presentations Drive Picker Drive file selection widget Cloud Search Unified search for enterprise Admin SDK Manage G Suite resources Email Markup Interactive email using schema.org Storefront for integrated applications G Suite Marketplace Other G Suite APIs/SDKs Contacts, Google+, Tasks, Vault...

#### MOBILE (FIREBASE)

Cloud Firestore Document store and sync Cloud Functions for Firebase Event-driven serverless applications Object storage and serving Cloud Storage for Firebase Crashlytics Crash reporting and analytics Firebase A/B Testing Create A/B test experiments Firebase App Indexing App/Google search integration Firebase Authentication Drop-in authentication Firebase Cloud Messaging Send device notifications Firebase Dynamic Links Link to app content Web hosting with CDN/SSL Firebase Hosting Firebase In-App Messaging Send in-app contextual messages Firebase Performance Monitoring App performance monitoring Firebase Predictions Predict user targeting Firebase Realtime Database Real-time data synchronization Firebase Remote Config Remotely configure installed apps Firebase Test Lab Mobile testing device farm Google Analytics for Firebase Mobile app analytics ML Kit for Firebase ML APIs for mobile

#### GCP FOUNDATIONAL OPEN SOURCE PROJECTS

gRPC RPC framework gVisor Secure container runtime Istio Connect and secure services Knative Serverless framework for Kubernetes Kubeflow ML Tool kit for Kubernetes Management of containerized applications Kubernetes **OpenCensus** Cloud native observability framework

Batch/streaming data processing

TensorFlow ML framework

## ADDITIONAL RESOURCES

Apache Beam

Google Cloud Home Page cloud.google.com cloud.google.com/blog Google Cloud Blog **GCP Medium Publication** medium.com/google-cloud Apigee Blog apigee.com/about/blog firebase.googleblog.com Firebase Blog G Suite Developers Blog gsuite-developers.googleblog.com Google Cloud Certifications cloud.google.com/certification Google Cloud System Status status.cloud.google.com Google Cloud Training cloud.google.com/training Google Developers Blog developers.googleblog.com Google Maps Platform Blog mapsplatform.googleblog.com Google Open Source Blog opensource.googleblog.com security.googleblog.com Google Security Blog Kaggle Home Page www.kaggle.com kubernetes.io/blog Kubernetes Blog cloud.google.com/about/locations Regions and Network Map